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PUTTING THE "O" IN JOINT DOTMLPF: ORGANIZATIONAL CAPABILITIES FOR JOINT TASK FORCE COMMAND AND CONTROL

by

Lieutenant Colonel James F. Dickens
United States Army

Colonel Steve Kidder
Project Adviser

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ABSTRACT

AUTHOR: Lieutenant Colonel James F. Dickens

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Across the defense establishment, joint transformation is beginning to take hold, though unevenly. Sweeping changes concerning joint doctrine, training, leader development, acquisition, and facilities have taken effect under joint purview and direction through the incremental implementation of the Joint Concepts Integration and Development System (JCIDS). But, despite advances in jointness at tactical levels, the US joint force still lacks practical capabilities for Joint Task Force (JTF) command and control (C2) in unanticipated operational crises. This is true largely because the development and acquisition of military organizations necessary for effective JTF C2 remain the purview of individual services. Of the various areas of defense department transformation, organizations - or the "O" in Joint DOTMLPF - remains beyond the effective grasp of the collective joint force.

Experience tells us that Regional Combatant Commanders (CCDRs) need a set of joint force C2 capabilities that are adaptable, scalable and sufficient to command across the multiple domains of the contemporary and future operating environments. Only with such implements can CCDRs truly unify action as will be necessary under the conditions advertised by the joint force’s future Joint Operating Concepts (JOCs). Transformation's demands as well as recent combat experience reiterate an urgent operational need for JC2 capabilities that can stand without hobbling CCDRs or the service force providers when sustained over time.

This research examines the requirement for JTF C2 capabilities and reviews the nominative capabilities aimed at mitigating future deficits in this critical capability. It further analyzes and compares the joint force’s preeminent JTF C2 concepts and capabilities, making conclusions about their potential contribution to a joint solution set. Finally, this research recommends the co-development of a modular JC2 organization designed for use in the context of JTF command.

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CURRENT TO FUTURE CAPABILITIES GAPS IN JOINT C2

Despite great advances in jointness at tactical levels, the US joint force lacks practical capabilities for effective Joint Task Force (JTF) command and control (C2) for unanticipated operational crises. The performance of deployed JTF headquarters through current crises reveals that these severely strain the services and reveal considerable inefficiencies within the headquarters themselves. And, there are no capabilities under development that might indicate relief for this joint predicament or suggest future sufficiency for JTF C2. The joint force requires adaptive and capable joint command and control (JC2) for use at JTF level today, and must radically adjust its approach to obtaining such capabilities in order to ensure enhanced jointness in the indefinite and conflict-filled future.

Joint transformation is taking hold among Defense Department and service-based concepts and programs even in the current crisis-filled environment. Sweeping initiatives concerning joint doctrine, training, materiel, leadership and education, and facilities have taken form through the progressive implementation of the Joint Concepts Integration and Development System (JCIDS) as the process seeks to integrate defense acquisition efforts toward jointly established goals. However, among the several developmental spheres of joint transformation, the organizations – or the "O" in JDOTMLPF[1] – remain beyond the effective grasp of JCIDS. The development and fielding of organizations, transformational or otherwise, remains the purview of the services, and guarded within their defense programs. This even holds true for most JC2 organizations.

> The way we create joint task forces today, principally, is whoever is the commander goes to their service and says, 'I need command and control,' and they bring that in to operate a joint force. That's the best we can do today; but the impact is that it does not give you a true joint capability in commanding joint forces, and it contributes to a lack of integration, both in exercises and actual operations.[2]

This finding from a 2001 defense analysis is still observable as a pattern of performance in Operations ENDURING FREEDOM and IRAQI FREEDOM (OEF and OIF). For these operations, hat-in-hand JTF commanders have been constantly obliged to seek out grudging support from the military services to fulfill JC2 requirements levied against them.[3] The resulting JTF headquarters show significant gaps between required and inherent JC2 capacity. These gaps provide clear evidence of the inadequacies of the joint and service organizations available to perform in the JC2 role.

The following figure illustrates how programmed JC2 functions do contribute to total JC2 capability, but that the sum of those contributions is far less than the total requirement:

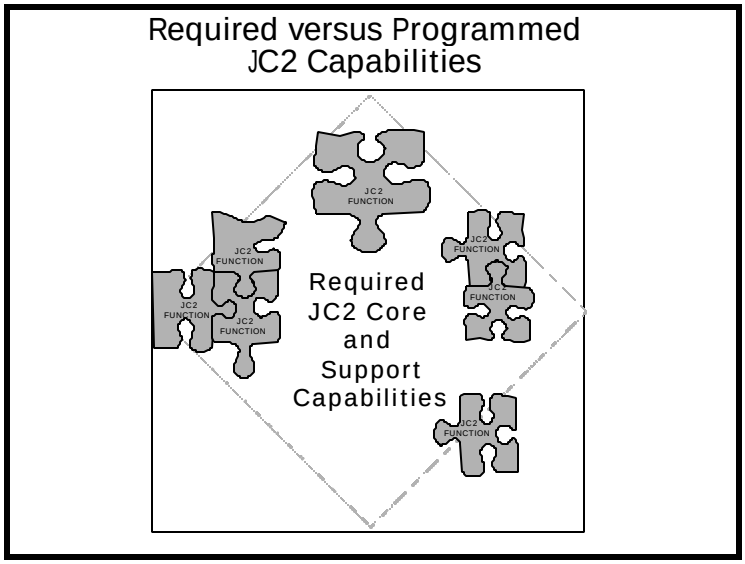

FIGURE 1: REQUIRED VERSUS PROGRAMMED JC2 CAPABILITIES

Joint and service efforts to enhance JC2 capabilities currently focus on the existing increments of JC2 function, effectively precluding the eventual closure of the obvious JC2 capability gaps.

Theoretically designed to overcome just such capabilities gaps, JCIDS shows no inclination to take on the JC2 organizational design problems at hand. The same defense analysis mentioned earlier also observed: “So far, we have not figured out how to organize, train, and equip a joint command and control system. That's why we don't have one.” [4] Combined developmental efforts have produced multiple Joint Integrating Concepts, (JICs) and Joint Functional Concepts (JFCs) illuminating critical JC2 issues. Many useful concepts and initiatives across JDOTMLPF derive from these.[5] But, despite this, the joint force has not promulgated a single concept or capability that integrates JC2 capabilities across all services and JDOTMLPF in a holistic JC2 solution set.

Based on the patterns of crisis action forecast for the duration of the Global War on Terror (GWOT), regional combatant commanders (CCDRs) will require multiple suites of subordinate JC2 that are agile, adaptive and sufficient to command across the full spectrum of future operating environments.[6] Only with broadly capable JC2 can CCDRs reliably unify the actions

of assigned military forces under the complex conditions and over the operational timeframes implied by these operating environments.[7] But, without improved coordination of joint force-development efforts, the services will be left individually responsible to organize, train and equip the JC2 organizational increments necessary to achieve effective JC2. This is not apt to occur in a tightening fiscal environment where arguably superfluous service C2 capabilities are already being culled-out of the force in the name of service transformation.[8]

Can the joint force better design and field JTF headquarters that suitably and efficiently apply existing service and joint capabilities? Can this be done in a way that impacts less negatively on joint generating forces when employed over time? On 4 February 2005, the Secretary of Defense (SecDef) issued policy implementation guidance directing renewed attention toward this specific set of problems.[9] Transformation's demands as well as OEF and OIF experience reiterate the need for JC2 organizations that can stand without hobbling the CCDR, his functional components, or the service force providers.

This research examines the requirement for JC2 capabilities at JTF level and reviews the nominative capabilities aimed at mitigating future deficits in JC2. It further analyzes and compares the joint force's preeminent JC2 capabilities and makes conclusions about their potential contribution to a JC2 solution set. Finally, this research recommends the co-development of a modular JC2 organization designed for use in the context of JTF command.

VALIDATING THE REQUIREMENT FOR C2 AT THE JTF LEVEL

The need for JC2 at echelons below the CCDR is well established in the documentation governing employment of US armed forces. These documents advertise JC2's primary functions as: applying the joint force; deploying and sustaining military capabilities; securing battlespace; and, achieving a 'competitive advantage' over adversaries through decision superiority. [10] Defense strategies reiterate the demand for these functions and provide general direction for their optimization through transformation. Contemporary operations confirm the trajectory for change laid out by the transformation strategy in meeting future JC2 requirements.

Meeting the Demand for Unified Action

According to joint doctrine and instruction, joint forces must be flexible, modular, networked and deployable. They require headquarters that are capable of "dynamic decision-making" in response to agile threats, and can "exploit fleeting opportunities."[11] To achieve this level of performance, Joint Publication 0-2, Unified Action Armed Forces (UNAAF), requires CCDRs to command through a combination of service and/or joint functional components, or

directly through subordinate joint headquarters, namely JTFs. 'Unified Action'[12] is commonly effected by CCDRs through combinations of these command approaches.

The first mode has been favored for high-intensity operations in the Central Command (CENTCOM) Area of Responsibility (AOR). Since 1990, multiple CENTCOM operations required the focus of the CCDR over an obvious theater main effort as was seen in: Operations DESERT SHIELD (90-91); DESERT STORM (91); DESERT THUNDER (97-99); ENDURING FREEDOM (01-02)[13]; and IRAQI FREEDOM (03).[14] The use of subordinate JTFs has proven the preferred mode for JC2 of major operations occurring simultaneous with other major operations in the same AOR. These represent operations which were not or could not become the focus of the CCDR but required high levels of integration among assigned and supporting forces. Such was the case for the latter phases of OEF and OIF, as well as for operations in the Horn of Africa (HOA). CCDRs also often employ JTFs for contingencies of lesser intensity, complexity or duration, and also for discrete missions that might otherwise consume inordinate attention of the CCDR or his staff. Examples include JTFs deployed to Liberia and Haiti, the longstanding JTF JOINT GUARDIAN in the Balkans and JTF GUANTANAMO commanding detainee operations in Cuba. CCDRs consistently demonstrate the need to combine multiple JC2 modes based upon the dynamic crisis conditions within their respective AORs.

CCDRs form JTF headquarters through one of three doctrinal techniques: establishing a semi-permanent standing JTF headquarters; augmenting an existing service headquarters; or, forming of an ad hoc headquarters from various contributors.[15] These techniques each have relative benefits and detractors that vary widely by the situation. And, "whatever option is used, a building process will be necessary."[16] These techniques each warrant consideration during crisis action planning to provide the best possible match of available JC2 capabilities to the operational requirements. JTF headquarters should be formed in a way that maintains the integrity of service organizations.[17] And once formed, JTF headquarters composition and core competencies must be proportional to and commensurate with the forces and missions assigned. Finally, there must be a measure of flexibility built-in to enable the effective management of dynamic missions under uncertain conditions.[18]

Impetus for JC2 Transformation

National military and joint transformation strategies compel current JC2 requirements toward higher standards. Emphasis on 'plug and play' modularity requires that JC2 build upon service core competencies through rapidly scalable employment approaches that enhance the inherent strength of joint operations.[19] The Quadrennial Defense Review of 2001 (QDR 01)

assigned various objectives toward obtaining improved JC2, including: “standing joint task force headquarters, improved joint command and control, joint training, and an expanded joint forces presence policy.” QDR 01 also established the need for jointness below CCDR – even within the service components,[20] and called for a future “ability to integrate highly distributed military forces in synergistic combinations for highly complex joint military operations.”[21]

The previously mentioned defense analysis, known also as the ‘McCarthy Report’ determined that JC2 was the most important aspect of change necessary among joint forces. It confirmed QDR 01’s view of the need for standing JC2 capabilities for rapid crisis response. Further, it recommended the establishment of standing JTF headquarters composed of smaller, agile, adaptive and cohesive teams, employing reach-back and collaboration as the rapid basis for JC2 crisis response. The McCarthy Report also recommended an inter-service modular approach to achieving a truly joint system for standing JC2.[22]

Largely adopting the outputs of QDR 01, the Defense Strategic Planning Guidance (SPG), Transformation Planning Guidance (TPG) and the Joint Operations Concepts (JOpsC) published practical “front end”[23] guidance for the further development of future JC2 concepts. These documents advanced the notion of standing JTF headquarters as the seminal element in improved JC2 concepts, but also acknowledged the need for broader exploration of the issues. However, since these documents are themselves transformational, they have yet to excite effective codevelopment of JC2 capabilities within the joint force.

Operational Validation of JTF Requirements

OEF and OIF experiences have thoroughly educated ongoing JC2 concept development as evidenced in the changes to strategic guidance documents published since QDR 01. These experiences also confirm the transformational azimuth, while highlighting the impact of the joint force’s current JC2 inadequacies, and lack of organizational scalability, modularity, or agility. [24] Anthony Cordesman, a prominent defense analyst offered that experience in OEF “. . . argues for a more expeditionary approach to regional and theater command.”[25] In his analysis of OEF, Cordesman questioned the use of the CCDR as the single integrating level of command for joint forces and “. . . argued for establishing joint—not service—commands at every level.” [26] Subsequent analysis of the situation in the CENTCOM AOR by the CCDR and the Joint Chiefs of Staff (JCS) led to the eventual establishment of a total of six subordinate joint headquarters [27] to control operations in the three joint operational areas of Afghanistan, Iraq and HOA.

In December 2004, Joint Forces Command (JFCOM) completed an analysis of JTF employments from 2000 through the end of 2004 in order to support the ongoing refinement of

JC2 working concepts. The analysis revealed a 240 percent increase (from 10 to 24) in total JTF employment during that timeframe as well as an 1100 percent increase (from 1 to 11) in new JTF activations.[28] Two of JFCOM's observations established that, "JTF Headquarters do not receive key joint expertise until after initial planning is completed;" [29] and, that their "full complement of joint expertise arrives after execution (or not at all)."[30] Recognizing an urgent need for change, they posited: "How do we enjoy the capabilities associated with permanent JTF Headquarters without incurring a LARGE resource/manpower bill?" [31] As a hedge against the high manpower costs, they suggested that future augmentation occur through Permanent Change of Station (PCS) assignments of individuals to selected JTF headquarters.[32] They also called for employment of specialized unit-type capabilities to broaden headquarters functionality and improve integration of interagency and multinational operations.[33] Nonetheless, they still assessed that JTF headquarters would be formed primarily through use of service headquarters as supported by a problematic individual augmentation system.[34]

SUMMING THE REQUIREMENT FOR JC2

Recent operational tempo since 2001 indicates that JTF-level operations occur at an average rate of more than five per year with at least three concurrent major joint operations continuing through the last four years.[35] And, each major[36] JTF headquarters represents individual augmentation requirements of several hundred servicemen and women beyond the actual units tasked to perform these JC2 functions for the duration of the associated crisis. Across the joint force, this currently demands a total of more than 6500 uniformed individuals for augmentation.[37] Assuming no further growth in JTF demand, and excluding consideration of JTFs which have specialized or semi-permanent aspects to them, two to three operational JTFs will be required for sustained JC2 over concurrent major operations for the indefinite future.[38] The US 1-4-2-1[39] military strategy further validates the demand for two sets of JTF JC2 that would be immediately available for crisis-response in support of theater combatant's missions beyond Theater Security Cooperation (TSC) and deterrence.

Doctrine and strategy are explicit concerning the need for robust JC2 capabilities that achieve unified action and full spectrum dominance at echelons below CCDR. Operational experience confirms both the view of future requirements as well as the gap between these and the current JC2 capabilities. Achieving the appropriate level of future JC2 demands joint process adjustments toward the acquisition of a singular and sustainable JC2 capability based upon capabilities contributions from the entire joint force.

JCIDS AND JOINT CONCEPTS FOR EFFECTIVE JC2

If the joint force is to acquire a sufficient JC2 capability, this will occur through JCIDS. And, JCIDS has already induced changes to the ways by which joint forces conduct acquisition especially with respect to materiel acquisition programs. Short of integrating the service's acquisition processes, it has at least brought their programs elements together for collective consideration as JCIDS matures through implementation.

JCIDS aims to provide joint capabilities within the Future Years Defense Program (FYDP), emphasizing joint 'concepts' as the defining logic for acquisition under Department of Defense (DoD) and service planning, programming, budgeting, and execution processes.[40] Capabilities derived from the resulting joint concepts are further 'codeveloped' or 'coevolved' by the various participants under JCIDS, and eventually expressed as approved requirements under rigorous and iterative joint review processes.[41] These critical review processes are designed to insure selection of the most effective and efficient combinations of joint capability integrated across JDOTMLPF.

The Office of the Secretary of Defense (OSD), the Joint staff, CCDRs and the services each have unique but interdependent roles within JCIDS. However, the process center of mass lies where it always has – with the service's statutory programming authorities. Despite this, the joint force currently collaborates over numerous JC2 concepts which seek to set conditions for the fulfillment of acknowledged future JC2 requirements.[42] To date, the outputs of these collaborative efforts tend to maintain maximum generality, reflecting the difficult nature of the joint codevelopment process, as well as the complexities of the JC2 subject matter.

JC2 CONCEPTS TO CAPABILITIES

Once governing concepts are approved for refinement as Joint Operating Concepts (JOCs), they effect the development of the JFCs or JICs necessary to enable the overarching concept. Included among these concepts for JC2 are the approved JC2 JFC, a Draft JC2 JIC and a Draft Network-centric Warfare (NCW) JIC. These concepts should identify the 'joint tasks' necessary to infer and induce the development of critical 'joint capabilities.'[43]

The Draft JC2 JIC identifies a nominative set of JC2 capabilities. In addition to these new concepts documents, are the Desired Operations Capabilities for C2 (C2 DOCs) identified through pre-JCIDS acquisition processes. Based upon the capabilities associated with both the old and new acquisition processes, notable changes seem to have occurred concerning the JC2 capabilities desired by the joint force. First, the Draft JC2 JIC adapted the former C2 DOC of 'Achieve Unified Effort,' to a lesser requirement to 'Synchronize and Coordinate Forces.' This is

an apparent regression on the degree of jointness desired under future JC2. Second, the JC2 JIC fails to adopt the C2 DOCs of 'Experience And Judgment,' and 'Organize Headquarters And Forces' in any form. This indicates both a diminished appreciation for the basic qualifications of JC2 leadership and de-emphasis on the robustness of JC2 resources available to the JTF commanders. Third, the Draft JIC places significant emphasis on capabilities associated with collaboration and other subtleties of decision-making not formerly established within the C2 DOCs. Collaboration-based capabilities are discussed elsewhere among developing JICs as adding appreciably to JC2 effectiveness, and at least partly obviating the need to assemble headquarters as physical organizations. Considering these observations in combination, it seems that formerly critical JC2 capabilities – and especially the ability to 'Organize Headquarters And Forces' – may have been lost in translation from the former C2 DOCs to JCIDS and placed at risk for eventual development.[44]

The greatest shortfall of the JC2 capabilities development progress to date is that it remains mired in dialogue about underlying theories as many co-authors labor to reengineer JC2 constructs from the top down in a newly established and robust hierarchy of concepts. As such, the joint force has only begun to touch on the identification and analysis of the necessary future JC2 capabilities or address future JC2 requirements in actionable levels of detail.

Despite the transitional and translational errors from the old to new acquisition models implied by this assessment, much important work has been done and continues in the areas of JC2 concept and capability development. However, redirection and further progress are necessary to fully recapitalize the work previously done on JC2 capabilities and requirements.[45] For now, the joint force works earnestly on the underlying JC2 concepts while it manages a modest slating of JC2 initiatives that largely predate the governing concepts themselves.

JOINT AND SERVICE NOMINATED JC2 CAPABILITIES

JC2 capabilities exist in many forms and in various stages of concept development, acquisition, or operation. Prominent among these capabilities are JFCOM's Standing Joint Force Headquarter (SJFHQ), the Army modular headquarters concept for Units of Employment X and Y (UEx or UEy), US Pacific Command's (PACOM's) Standing Joint Mission Forces (JMF), and an unendorsed capability for enhanced joint command through theater level functional components. Other narrower JC2 capabilities are separately available or have been associated with these concepts including, materiel, training initiatives and JC2 support organizations, but they do not serve to define broad JTF C2 alternatives. Each of the four main JC2 capabilities purport to significantly enable JC2, though from widely different perspectives.

Under close review, none of these JC2 capabilities are as holistic as their sponsors might claim as they are each formed and refined with proprietary C2 functions in mind. As such, they do not directly address the JC2 functional gaps implied by their use within any scenario other than those for which they were specifically engineered. In fact, the core JC2 functionality of each is only coincidental to its own set of designed functions.[46] Thus, a discussion of required core JC2 functionality is a critical step in further analysis. A clear view of core JC2 function will indicate the potential areas of underlap between the various capabilities and the total actual requirement for JC2. It will also identify potential functional overlap where nominative JC2 capabilities are excessive or unnecessarily incorporate service-based functionality.

STAKING OUT THE JC2 TRADE SPACE

JC2 functions are commonly confused with adjunct capabilities that enable JC2, but are not inherent to it.[47] This leads to the development of capabilities that commonly exceed joint requirements in selected areas while falling short in others. The following figure depicts the generic JC2 support and enabling functions around a conceptual 'core' of JC2 functionality:

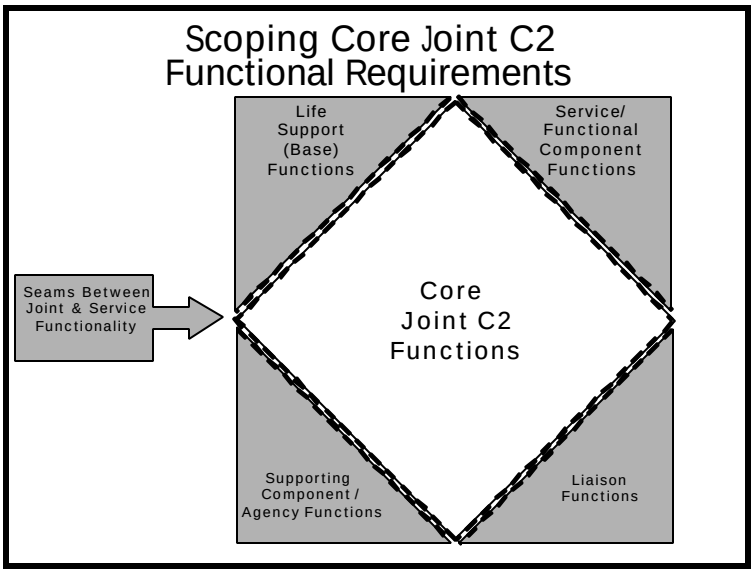

FIGURE 2: SCOPING THE JC2 FUNCTIONAL REQUIREMENTS[48]

This figure aligns adjunct or peripheral JC2 functions into four illustrative categories, shading those capabilities that might be provided by non-organic unit-type capabilities without

degradation of the JC2 support function. The distraction with building-in these functions into basic JC2 capabilities significantly complicates their ultimate refinement and will thwart the efficient co-management of these by multiple services. Examples include the Joint Communications Support Element (JCSE), the Joint Intelligence Support Element (JISE) and a JFCOM proposed Joint Public Affairs Support Element (JPASE)[49] which are clearly essential to support JC2 processes. However, they are also functions and services that can be effectively provided to a headquarters rather than as an internal function of that headquarters, thus, indicating that these lie outside the core.[50] And yet, failure to account for these critical functions within a given JC2 capability also risks assumption of significant functional gaps. Nonetheless, carefully engineered service-based unit-type capabilities should be applied as supporting functions rather than embedded with core functions.[51] Ultimately, a coherent JC2 capability would fulfill the total requirement for the JC2 core functionality.

The next figure superimposes prominent JC2 capabilities with selected supporting capabilities over the JC2 trade-space showing how they compare against total requirements.

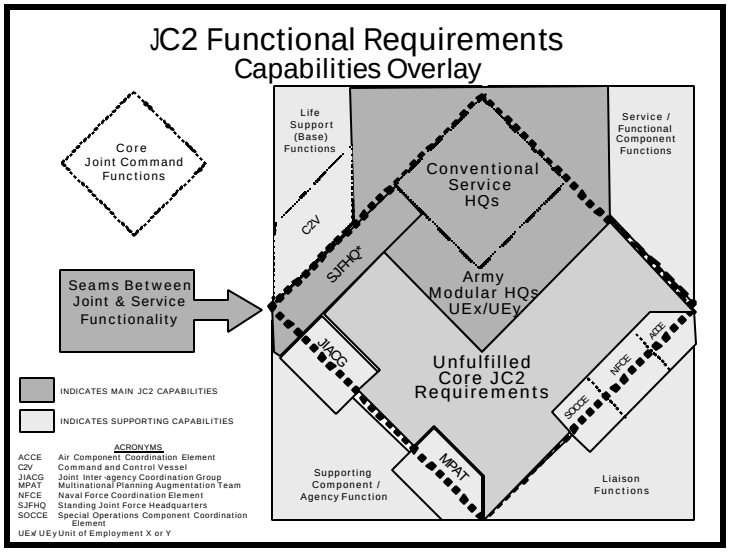

FIGURE 3: JC2 CONCEPTS TO REQUIREMENTS FUNCTIONAL OVERLAY[52]

Note that this figure does not attempt to account for command functionality of CCDR headquarters, theater service components or standing JTFs. These capabilities should obviously aim to fulfill the total JC2 requirement in the specific context to which they are applied.

All other JC2 capabilities displayed here demonstrate that, while they address some measure of core JC2 function, there remains substantial functionality not addressed by these capabilities, even when employed in combination. This leaves a wide swath of unfulfilled functionality that can only be covered by assignment of ad hoc organizations or individual augmentation from the services.[53] JCIDS is intended to both focus service acquisition activities and to inform defense and service programming decisions. The JC2 outputs of JCIDS do not seem to suggest strong progress in this direction. Broad dialogue and narrow solutions prevail in lieu of the "quick-win joint capabilities" called-for in the JOpsC.[54] Despite this, these main JC2 capabilities deserve further evaluation with respect to their contribution to JC2 functionality writ large and their potential use as JTF headquarters alternatives.

EVALUATION OF JC2 CAPABILITIES

It seems that, although the joint force recognizes most of the current and future JC2 shortfalls implied by the foregoing discussion, quantifying them is a bigger challenge. This is partly due to a lack of comprehensive and durable JC2 standards which JFCs and JICs must eventually provide. It is also attributable to an intuitive sense that there are no right answers.

> There is no such thing as a 'good organization' in any absolute sense. Always it is relative; and an organization that is good in one context or under one criterion may be bad under another."[55]

JC2 requires a set of organizational standards that can indicate how well nominative capabilities compare against the requirements under a variety of operational conditions. The JC2 JFC takes steps toward establishment of such standards by first defining a JC2 context, and expressing within that context a set of JC2 attributes, measures and metrics.[56]

The JC2 JFC identifies eight attributes for JC2: Superior Decision Making; Shared Understanding; Flexible Synchronization; Simultaneous C2 Processes; Dispersed Command and Control; Responsive and Tailorable Organization; Full Spectrum Integration; Shared Quality Information; Robust Networking.[57] Except for 'Responsive and Tailorable Organization', these attributes might be equally infused in any JC2 capability through the effective integration of doctrine, training, materiel, and leader development (D-T-M-L) factors. As such, these do not aid in evaluating between organizational alternatives.[58] The JC2 JFC further develops the attributes into measures of effectiveness (MoE) with associated metrics. MoE for 'Responsive and Tailorable Organizations' JC2 attribute include: Robustness; Resilience; Adaptability; Responsiveness; and, Appropriateness. These are obviously useful when considered in light of recent crises, but they have yet to be used in gap analysis of JC2 capabilities under JCIDS.[59]

Beyond these MoE, operational experience and recent SecDef Policy Implementation guidance[60] suggest that three additional measures deserve consideration. These include: Force Provider Impact; Cost; and, Cohesion. 'Force Provider Impact' would estimate the total negative effect on readiness of the providing service(s) incurred by employment of service-required capabilities to a JTF over a protracted timeframe. This consideration is critical because of the evident impact on service – and especially Army – readiness induced by JTF employment in recent operations.[61] 'Cost' would measure the defense-wide programmatic costs of providing JC2 capability under the given concept. This is important because the avoidance of programmatic costs associated with increased force structure is the primary factor precluding outright adoption of high-end standing JC2 solutions.[62] The third measure is 'Cohesion,' or the degree to which organizational familiarity strengthens implicit communication, streamlines JC2 processes, and speeds decision making within the organization. Consideration of this is critical because the qualitative potential of an organization's sub-elements does not necessarily or immediately accrue to the total effective performance of the entire organization.[63]

JC2 MoE offered by both the JC2 JFC and this analysis can be further categorized into measures of organizational effectiveness and measures of organizational efficiency. This distinction provides additional insight into the relative merits of the capabilities, and also for the consideration of alternatives. TABLE 1 summarizes the eight MoE within these two categories, adding to these recommended MoE for the three new measures.

MoE	Metric
Effectiveness	
Robustness	The ability to maintain effectiveness across the Range of Military Operations (ROMO)
Responsiveness	Time required to change organizational structure
Appropriateness	Match between organizational structure and task
Cohesion	Time required to achieve effective performance
Efficiency	
Resilience	Time of effective performance without degradation
Adaptability of the Organizational Structure	Number and type of C2 organizational structures available
Force Provider Impact	Service force provider's readiness to meet all strategic requirements
Cost	Defense-wide programmatic costs

TABLE 1: MOE FOR JC2 ORGANIZATIONAL EVALUATION [64]

This establishes a complete set of standards that will allow rigorous evaluation and comparison between JC2 organizational alternatives. Next we will turn to evaluation of the JC2 initiatives.

ANALYSIS OF JC2 CAPABILITIES

Each of the five preeminent JC2 capabilities discussed earlier were adapted to a specific JC2 context and evaluated against estimated JC2 requirements for a protracted crisis associated with a major combat operation (MCO) in the near future. Due to the inherent complexities of the situation, full integration of joint capabilities and transformational processes are assumed as required. The integrated capabilities were evaluated against MoE provided at TABLE 1, and further assessed with respect to combined effectiveness and efficiency. [65] The tabulated results of this analysis will be shown at TABLE 2: COMPARISON OF JC2 CAPABILITIES toward the end of this section. Following is the outcome of that analysis.

Analysis of Command through Components

For this JC2 capability, the CCDR retains responsibility for integrating joint operations without establishing a subordinate joint force command. Theater-level functional components direct and control missions in support of or supported by other theater components, supporting commands and agencies. Priorities and mission requirements are established through CCDR-level integration processes. Inherent JC2 capabilities have been bolstered through the application of key supporting capabilities including the SJFHQ; a Joint Interagency Coordination Group (JIACG); and Multi-national Planning Augmentation team (MPAT) within the CCDR headquarters. Functional component coordination elements (FCCEs) including Air Component Coordination Elements (ACCE), Naval Forces Coordination Elements (NFCE), and Special Operations Component Coordination Elements (SOCCE) are exchanged between components to enhance cross-component coordination.[66]

Fully mature theater C2 structures provide for robust, responsive and appropriate JC2 within a highly cohesive team at theater level. As such, the effectiveness of the CCDR's option to command crises through components is very high. However, the performance of this capability declines gradually as its organizational increments are not resilient to the demand for high-intensity operations over a protracted timeframe**.** This weakness is attributable to the uniqueness of each of the participating headquarters elements, and their inability to be rotated by joint and services generating forces, except through permanent individual assignment or augmentation. Adaptability is marginally adequate as the component headquarters operate at maximum JC2 capacity against the crisis-based functional requirements while maintaining the vast service-specific theater-wide responsibilities. Force provider impact is nominal since there

are no new JC2 nodes requiring service augmentation. Costs are low for the same reasons. The overall efficiency of JC2 of this concept is therefore assessed as poor. Finally, the combined effectiveness and efficiency of the capability to Command through Components is assessed as adequate indicating this as a viable capability for future JC2.

Analysis of Ad Hoc JTF Headquarters

For this case, the CCDR chooses to integrate joint operations by establishing a JTF headquarters from a combination of in theater resources as well as those assigned through the Joint Operations Planning and Execution System (JOPES) process. Joint forces and missions transfer to the JTF from the CCDR, and the theater service or functional components once the headquarters is deemed mission capable.

The ad hoc JTF headquarters is slow in forming and low-performing once assembled such that all measures of effectiveness for this alternative are assessed as very poor indicating its potential invalidation as a legitimate JC2 capability. Shortcomings exist across the gamut of this ad hoc headquarters' functionality, depending partly upon its priority for sourcing among the other in-theater headquarters or as ultimately assigned through JOPES. The capability's only redeeming quality is found in its total absence of programmatic cost. Otherwise, it fails to deliver any measure of resilience or adaptability while impacting substantially on service force providers for augmentation. Combined consideration of effectiveness and efficiency for this capability indicate very low performance overall.

Analysis of SJFHQ and Modular Service Headquarters as a JTF

For this case, the CCDR chooses to integrate joint operations by establishing a JTF from a designated component headquarters that has been modularized to perform in such a capacity. Combined with this headquarters are an SJFHQ from the CCDR headquarters, as well as FCCEs from the theater-level components. CCDRs provide access to the JIACG, MPAT and other functional resources as necessary. Joint forces and headquarters increments are provided through in-theater resources as well as those assigned through JOPES. Tasked services provide additional JC2 capabilities including organizations, personnel and equipment as these are validated over time through JOPES.

The responsiveness and appropriateness of this JC2 capability are adequate to the specific JC2 requirements of the specific crisis. The robustness of the headquarters is poor given that selected capabilities including civil-military affairs, long-range planning, and liaison functions are not organic to any of the organizational elements compiled as a headquarters. The lack of these specific functions ultimately detracts from the total JC2 functionality of the

capability. Cohesion is poor as sub-elements arrive from a variety of sources with an uneven aptitude for management of the joint tasks at hand. The overall effectiveness of this JC2 option is poor. Resilience is poor within the assembled organization and there is a high degree of impact on force providers to make up for functional shortfalls through augmentation. Adaptability within the C2 structure is adequate given its fluid sourcing and forming processes. Programmatic costs incurred are low. As such, the efficiency of the capability to assemble a JTF Headquarters from a combination of the SJFHQ and a designated service core element is marginally adequate. The combined effectiveness and efficiency of this JC2 alternative is assessed as poor.

Analysis for Standing JTF Headquarters

For this case, the CCDR chooses to integrate joint operations through a standing JTF headquarters. This headquarters would have been previously established to support recognized contingencies but not necessarily the exact contingency to which it is now assigned. The JTF immediately accepts forces from in-theater resources as well as those assigned through JOPES and directs missions in support of or as supported by other theater components, supporting commands and agencies as established through both CCDR-level and JTF-level integration processes.

This JC2 option proves strong across all effectiveness measures except for appropriateness, which is only assessed as adequate because of the highly tailored nature of the headquarters. The capabilities shortfalls are most evident in the areas of integration of multi-national operations, long-range planning, and joint public affairs. The capability is marginally inefficient with its main detractor being high programmatic cost. Initially the headquarters is adaptable and resilient and produces only marginal impact on service force providers. However, once the original headquarters is rotated out of the crisis, the capability degrades significantly as it conforms to the overall effectiveness and efficiency levels of the previous modular service headquarters JTF option discussed earlier. The combined effectiveness and efficiency of this JC2 alternative is therefore assessed as adequate.

NO GOOD JC2 ALTERNATIVES?

The preceding analysis indicates that the “orders of magnitude improvement” [67] in future JC2 capabilities called for in defense transformation guidance is not immediately forthcoming. When evaluated here against the MoE for JC2 organizations, only the standing JTF and the no-JTF capabilities seem to meet the estimated requirements. It is especially true that no capabilities are particularly resilient, adaptable or friendly to the service force providers. Only

the 'standing' JC2 options seem to meet the explorative intent of QDR 01, and these only with the high predictable costs and inefficiencies associated with active force structure. And so, the question follows: How can the joint force approach the levels JC2 effectiveness in the standing JC2 options without substantially increasing the costs or other inefficiencies? This question is aptly illustrated by the following figure where JFCOM's comparison of ad hoc JTF C2 against permanent JTF C2 shows trade-offs across the "Range of Possibilities" or a spectrum of permanence for JC2 capabilities. This depicts the perceived JC2 development conundrum.

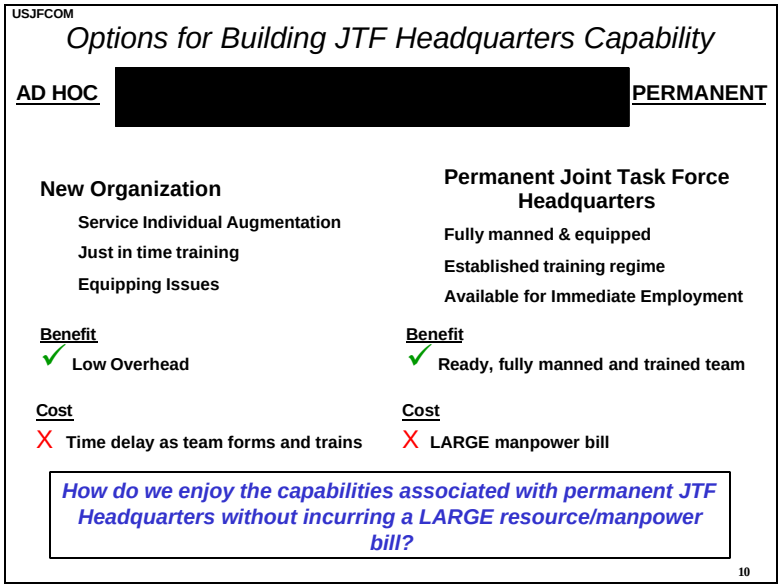

FIGURE 4: AD HOC VERSUS PERMANENT JTF HQS TRADE OFFS[68]

This particular chart suggests that the trade-off between efficiency and effectiveness is somewhat fixed. But, this same JFCOM analysis recognizes elsewhere that much of the ineffectiveness and inefficiency incurred occur because of the flaws in how we jointly organize train, equip and sustain JTF headquarters.[69]

Services themselves do not establish internal or functional C2 in such a self-defeating fashion. Service-based functions are formed by combinations of pre-designed and interdependent unit-type capabilities. These perform contingent missions with high degrees of readiness, interoperability and effectiveness on arrival. Among the services, there are no situations where massed individual augmentation and organizational cannibalization are employed to produce unit-type function. Yet, service-based forces can be counted on to be

both fully effective and efficient over the full course of a crisis. They accomplish this largely through modularity and an inherent capacity to sustain employed forces through rotation of unit-type capability from a robust generating force.

For joint headquarters elements, the situation is very different. JCIDS and other strategic planning constructs do not effectively integrate multi-service organizational designs or forecast service-based unit type capabilities to meet JC2 requirements. The McCarthy Report made this clear in 2001. A simple change in how JC2 is jointly organized might correct for this condition. By directing the modularization of interdependent service and component contributions to JC2, it would be possible to assemble effective JC2 capabilities against contingencies and resource equally capable forces for rotation of that capability over time. This could be accomplished at modest price and with nominal changes to military force structure. Following is the analysis of an alternative JC2 capability which applies joint modularity and successfully compensates for many of the shortcomings identified in the four previous JC2 capabilities. Further detail on the specific composition of the Joint Modular C2 capability is provided among the recommendations section of this analysis.

Analysis of the Joint Modularized C2 Capability

In this case, the CCDR integrates joint operations by establishing a JTF from a designated service headquarters that has been modularized and optimized to perform in such a capacity. Beyond the headquarters' organic functions, other JC2 capabilities are provided in designated combinations and modules from among the joint force and the services as generated through JOPES. Joint forces and missions transfer to the JTF from the CCDR, and the theater service or functional components once the JTF is deemed nominally mission capable. Once established, the JTF directs missions in support of or as supported by other theater components, supporting commands and agencies as established through both CCDR-level and JTF-level integration processes.

This JC2 capability is adequately responsive to the requirement for alert, deployment and assembly of the headquarters upon arrival. It is also highly robust, appropriate and internally cohesive with an overall effectiveness rating of high. The headquarters is highly resilient and adaptive to the JC2 requirements given its functional depth, and the availability of equally capable modules throughout the rotation base. There is virtually no impact on service force providers from any individual augmentation requirements, and only moderate costs incurred by the need to establish and maintain active and reserve JC2 modules in sufficient readiness to

support the capability over time. The efficiency of this concept is high, and alone among JC2 alternatives, the combined effectiveness and efficiency of this capability is very high.

COMPARISON OF JC2 CONCEPTS

The following table displays the JC2 alternatives ordered by the degree to which the JC2 capability is 'standing' and immediately available for CCDR use. On the left, JC2 capability below CCDR is not employed except as it is inherent within component headquarters. On the right, JC2 is continuously available in the hands of a standing JTF headquarters established to support specified contingency operations. The shaded column depicts the Joint Modularized JC2 alternative. Assessments offered here across the metrics for 'Responsive and Tailorable Organizations' are displayed in rows within the two categories of effectiveness and efficiency. Capabilities are assessed against each criterion as high (+), adequate (/), or poor (-) with a sum of high and poor assessments for the aggregate ratings. The negative metrics of 'Force Provider Impact' and 'Cost' result in low (+), nominal (/), and high (-) assessments.

Measure	Command through Components (No JTF)	Ad Hoc JTF	JTF Based on Service Modularized HQs / With SJFHQ	JTF Based on Joint Modularized C2	Standing JTF Hqs
JC2 Effectiveness					
Robustness	+	-	-	+	+
Responsiveness	+	-	/	/	+
Appropriateness	+	-	/	+	/
Cohesion	+	-	-	+	+
Effectiveness Sub Total	4	-4	-2	3	3
JC2 Efficiency					
Resilience	-	-	-	+	/
Adaptability	/	-	/	+	-
Force Provider Impact	/	-	-	+	/
Cost	+	+	+	/	-
Efficiency Sub Total	/	-2	-1	3	-2
Grand Total	4	-6	-3	6	1

TABLE 2: COMPARISON OF JC2 CAPABILITIES

TABLE 2 depicts the results of analysis for each of the five JC2 capabilities. Obviously, none of the capabilities are impeccable. When subjected to close analysis, the line up of potential joint and service capabilities for future JC2 prove generally problematic except for the

shaded alternative capability. Standing capabilities represented in the first and last columns are shown to be more effective than the non-standing alternatives. All except the Joint Modularized C2 capability exhibit gross inefficiencies. Only the jointly engineered combination of service-based organizational capabilities achieves a positive balance of effectiveness and efficiency among the potential JC2 capabilities. This comparison strongly suggests the development of Joint Modularized C2 capability would be appropriate if minor concessions are acceptable on both responsiveness and cost.

RECOMMENDATIONS FOR THE DEVELOPMENT OF JOINT MODULARIZED C2

Based upon the foregoing analysis, several recommendations are in order. First, these analyses suggest further refinement of many useful aspects of each existing capabilities and the related initiatives offered for JC2 among the working JFCs and JICs. They also suggest more work on defining the many supporting and enabling capabilities for JC2 which exist throughout the joint force. Changes are also inferred for the processes by which the joint force identifies and integrates organizational functionality across service lines. These processes should be modified, specifically as they affect the development and fielding of JC2 functions.

In order to support the establishment of Joint Modularized C2, the Office of the SecDef, the Joint Staff and services should take immediate steps to:

- Establish a tiered framework for JC2 which differentiates between requirements for application of JC2 through: CCDR-level headquarters; functional component headquarters; permanent subordinate unified command headquarters; major standing JTF headquarters; and focused or specialized function JTF headquarters.
- Codify JC2 functional requirements within JFCs and JICs with specific focus on JTF command in full spectrum operations including Major Combat, and Stability Operations scenarios consistent with published JOCs. Adapt JC2 MoE to consider critical factors including: Force Provider Impact; Cost; and, Cohesion.
- Clarify the functional seams between core, adjunct, and enabling JC2 functions to provide for improved modularization of logistical, administrative, technical and base support elements as unit-type capabilities derived from the services.
- Establish joint interface standards for all JC2 core and JC2 support modules to support rapid scaling-up to execution and mission-based force reconfiguration.[70]
- Establish and sustain robust service or functional component command headquarters with detachable FCCEs in each AOR. These headquarters must be sufficient to support execution of service command functions, or command of functional

components for TSC and 'deter forward' missions, as well as to support rapid transition of command to alternative crisis JC2 capabilities.

In support of this, the DoD should establish requirements within strategic guidance to:

- Direct development and fielding of the following suite of joint and joint reserve modular capabilities and a rotational base as necessary to sustain JC2 function based upon validated JC2 requirements (See TABLE 3 below). Note that modules labeled with an asterisk have no current basis in joint or service capability.

Module	Purpose	Origin	Basis for Rotation	Total Required[71]
Standing Joint Force Headquarters (SJFHQ)	Provide immediate response and scale-up of JC2 planning and execution functions for service-based core C2 elements	CCDR HQs	Return to CCDR control when replaced by JFCOM Liaison and Support Cell	4 (1 per O/S[72] CCDR)
***JFCOM Liaison and Support Element (JLSE)[73]**	Provide rapid response capability for support to JTFs where requested by CCDR to backfill for SJFHQ	JCS-controlled JFCOM Reserve Component[74]	Rotated by JFCOM in coordination with JCS, CCDR and supported JTF	10 (5 per JTF)
***Joint Augmentation Detachment (JAD)**	Augment key joint functions of JTF staffs as required for sustained operations	JCS-controlled JFCOM Reserve Component	JFCOM in coordination with JCS, CCDR and supported JTF	10 (5 per JTF)
***Joint Mobile Liaison Team (JMLT)[75]**	Support joint liaison requirements between JTFs and other designated major headquarters	JCS-controlled JFCOM Reserve Component	JFCOM in coordination with JCS, CCDR and supported JTF	10 (5 per JTF)
***Joint Public Affairs Support Team (JPASE)[76]**	Support joint Public Affairs functions within JTF headquarters.	JCS-controlled JFCOM Reserve Component	JFCOM in coordination with JCS, CCDR and supported JTF	10 (5 per JTF)
Joint Communications Support Element (JCSE)	Provide rapidly deployable joint communications necessary for contingency JC2	JCS-controlled JFCOM Reserve Component	Redeploy when replaced by service-based Communications Support Element	2 (1 per JTF)

TABLE 3: JOINT AND JOINT RESERVE C2 MODULES

- Direct the development and fielding of the following service-based modular capabilities and a rotational base as necessary to sustain service fulfillment of JC2 functions based upon validated JC2 requirements for two concurrent JTF headquarters over major operations (See TABLE 4 below):

Module	Purpose	Origin	Basis for Rotation	Total Required
Service-based Core C2 Headquarters[77]	Provide operational-level headquarters with command functionality and basic joint interoperability	Services	Rotated by the providing service in coordination with CCDR	6 (3 per JTF)
Functional Component Coordination Element (FCCE) [78]	Provide integration of functional component capabilities within the JTF	All CCDR-level service components not providing HQs element	Rotated by functional components in coordination with the JTF	8 (2 per service / functional component)
Intelligence Support Element (ISE)	Provide joint intelligence interface to enable support at JTF level with service intelligence capabilities	Services	Rotated by the providing service in coordination with the supported JTF	6 (3 per JTF)
Communications Support Element (CSE)	Provide joint communications interface to enable support at JTF level with service communications capabilities	Services	Rotated by the providing services in coordination with the supported JTF	6 (3 per JTF)
Civil Affairs Planning Team (CAPT)[79]	Supplement Civil-military planning and integration functions in JTF staff	USSOCOM	Rotated by the providing services in coordination with the supported JTF	6 (3 per JTF)
Deployable Joint Command and Control (DJC2) Suite	Provides a modular JC2 physical plant and staff workspace	Services	Provided by services for the duration of contingency JC2 commitment	2 (1 per JTF)
C2 Vessel (C2V)	Provide C2 ships and crews configured for use as the footprint for JTF C2 afloat	Navy	Rotated by the providing services in coordination with the supported JTF	2 (1 Atlantic / 1 Pacific)
Contingency Planning Detachment (CPD)[80]	Supplement planning functions at JTF level for sustained complex contingencies	Army and Marine Corps Reserve Components	Rotated by the providing service in coordination with the supported JTF	10 (5 per JTF)
Service-based JTF Augmentation Teams (JTFAT)[81]	Provide service inherent and joint functions based upon normalized Joint Manning Document requirements	Service Reserve Components	Rotated by the providing service in coordination with the supported JTF	20 (5 per service per JTF)

TABLE 4: COMPONENT / SERVICE C2 MODULES

- Coordinate the development and fielding of the required Inter-agency and Multi-national modular capabilities and a rotational base as necessary to sustain interagency support to JC2 function based upon validated JC2 (See TABLE 5 below).

Module	Purpose	Origin	Basis for Rotation	Total Required
Joint Interagency Coordination Groups (JIACG)[82]	Supports integration of interagency priorities to achieved unified effort	Provided through JIACG at CCDR level	Rotated by CCDR in coordination with supporting agencies and JTF	6 1 per O/S CCDR & JTF
Multi-national Planning Augmentation Teams (MPAT)[83]	Supplements JTF planning functions to improve multi-national planning and integration	Provided from CCDR HQs or other standing multi-national headquarters or major troop contributing nations	Rotated by providing headquarters in coordination with JTF	4 1 per O/S CCDR
Defense Agency Supporting Elements[84]	Provide field support for improved integration of national and technical capacities		Rotated by supporting agency in coordination with JTF	As Required

TABLE 5: INTERAGENCY / MULTI-NATIONAL MODULES

Finally, it is recommended that CCDRs:

- Establish and publish contingency plans which provide rapid joint modular C2 response that minimize or eliminate ad hoc elements and individual augmentation requirements.
- Validate specific JC2 functional demands as soon as possible at the onset of crisis to allow for improved resourcing against the requirements.

With the exception of JLSEs, JADs and JMLTs identified in TABLE 3 above, each module mentioned in the preceding tables has a basis in existing service capabilities or among concepts of operations used in OEF or OIF operations.

Once these various modules are assembled and employed as a Joint Modularized C2 capability, the evident gaps in JC2 trade space identified in FIGURE 2 are eliminated. This is illustrated below in FIGURE 5 using an Army modularized headquarters UEx as the core service-based C2 module as a JC2 example. Here, overlaps exist between JC2 core function and Army service component function based upon the inherent life support, communications, and intelligence capabilities of the UEx module. Overlap also exists between core JC2 and unit-

type liaison functions based upon the performance of the JMLT and the embedded FCCEs. Not depicted as JC2 functional overlap, the SJFHQ/JLSE provides improved liaison in the vertical plane to the CCDR headquarters. Finally, robust overlap exists between core JC2 functions and those of supporting commands and agencies based upon the employment of JIACG, FSTs and the MPAT. In this example, it is clear that the actual resourcing of the JTF headquarters exceeds the core joint functionality requirements, but only to the extent that the dual purpose modules applied in support of the concept possesses those overlapping capacities.

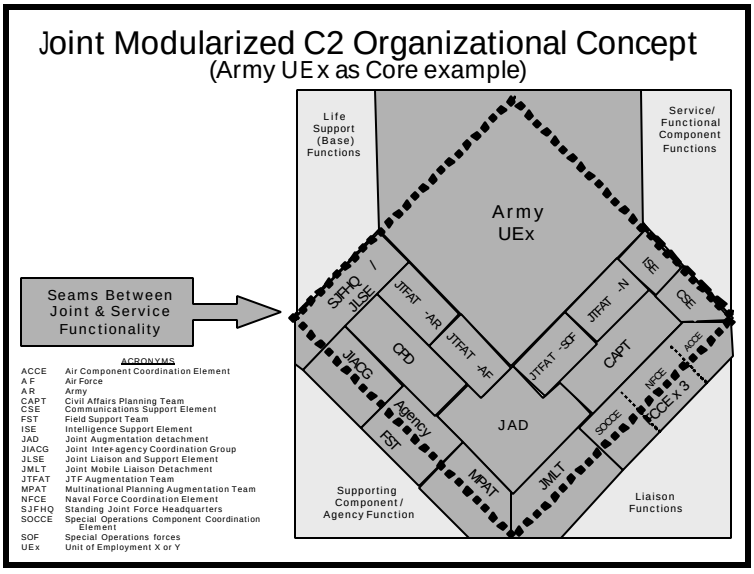

FIGURE 5: JOINT MODULARIZED C2 ORGANIZATIONAL CONCEPT[85]

The capabilities as depicted here are shown as necessary for direct integration into a complete modular JTF headquarters. Once combined, these contribute immediately to the effectiveness and efficiency of a robust JC2 capability and transition over the reserve mobilization timeframe to a fully sustainable suite of modular capabilities that minimize the ad hoc aspects of JC2 and virtually eliminate service-based individual augmentation requirements.[86]

Applying military capabilities in such pre-design modular increments is not novel in any sense as this is the only method by which service C2 is constructed. What is novel and critical is the adoption of modularity across service lines. Application of JC2 capabilities in such pre-defined combinations would insure a coherent JC2 capability at little additional expense to the services or joint force. Fielding of these capabilities and operational testing could lead in short

order to both the improved fulfillment of current JC2 requirements as well as to the refinement of future capabilities optimized for technology-enabled future JC2. Eventually, some of these functions could be 'networked' out of the physical headquarters organization as and when technologies allow.[87]

FILLING THE JTF C2 CAPABILITY GAP

JOpsC provides a view that future joint forces should gracefully plug-in to standing C2 capabilities and combine to produce immediate and synergistic capabilities.[88] This is difficult to imagine if the "adaptable, standing, joint C2 structures"[89] are the same capabilities the joint force is considering today. And, despite the relative advantages[90] among each of the nominative capabilities, none are engineered to assure rapid achievement and maintenance of unified effort among assigned missions and forces across the spectrum of conflict.[91] Transformational initiatives predict little change from JC2 that forms slowly, gains effectiveness only over time, is thinly resourced and detracts from the basic readiness of the supporting services once applied. This sort of JC2 will not capitalize on the capabilities of a synergistic future joint force.

Despite a refined defense acquisition process, a clear mandate for the transformation of C2, and a strong body of knowledge concerning the challenges of performing JC2 in the contemporary operating environment, coherent organizational concepts for JTF C2 elude the joint force. Increments of the solution set have been developed, proofed and field-tested over years by CCDRs and the services. Experience and experimentation both indicate the current and future capabilities gaps. Still, there is no satisfactory response available to the CCDR's plea for subordinate JC2 capabilities. Meanwhile, the current processes for establishment and sustainment of JTF headquarters wear away at both joint and service C2 capabilities at the beginning of a stressful and protracted period of conflict in the GWOT. This must change. The joint force must now transition from a focus on further dialogue, lexicon refinement, and contemplation of further technologies toward the development of a "good-enough"[92] concept for JTF C2.

Effective JTF C2 organizational capabilities can be fielded in the near term and made sufficient over time to the sustainment and rotational demands of the future. This calls for capabilities that are 'born joint,' integrated, and sustainable across service lines. To achieve this, the joint force must unite its best ideas and efforts into a singular strategy for organizational capabilities. Improved integration across JDOTLMPF, with a focus on modular organizational capabilities ". . . ensures that technical, doctrinal, and cultural barriers do not limit the ability of

joint commanders to achieve their objectives."[93] It further increases JC2 agility, flexibility and endurance thereby expanding the range of options available to the president in keeping with the intent of the NMS.[94]

Whether JTF headquarters remain suitable implements in a future era of network-centricity remains to be seen. For now and the manageable future, JC2 capability at echelons below CCDR are prerequisite to unified action. This research offers broad analysis of JC2 concepts and capabilities with an alternative concept to improve JC2 effectiveness with little change to existing joint and service programs. Closing the capabilities gaps for JTF C2 demands a joint strategy for the fielding of effective organizations that are interdependent by design, sustainable by the joint force and immediately available as the unifying factor for our national military strategy in the uniquely joint domain of JTF command.

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ENDNOTES

[1] DOTMLPF: Military Acronym for force development categories of Doctrine; Organizations; Training; Materiel; Leadership and Education; Personnel; and Facilities. Sometimes DOTLMPF or for Joint applications -- JDOTMLPF.

[2] Department of Defense, "Special DoD News Briefing on Defense Transformation, General James P. McCarthy, U.S. Air Force, Retired", Tuesday, June 12, 2001 - 1:30 p.m. EDT, Transcript, p. 9; available from http://www.defenselink.mil/pubs/qdr2001.pdf; Internet; accessed 16 March 2005. See also: James McCarthy, "Transforming Military Operational Capabilities: Transformation Study Report, Executive Summary, Alexandria VA, Institute for Defense Analyses, April 2001.

[3] Multiple JTFs have recently been approved for resourcing through permanent assignment of personnel as opposed to the rotation of individual augmentees which had been the case through the end of 2004.

[4] Department of Defense, "Special DoD News Briefing on Defense Transformation," Transcript, p. 8.

[5] The acronym "JC2" is currently reserved for use under JCIDS for the title of a follow-on capability to the Global Command and Controls System (GCCS). JC2 as used in this monograph does not describe any specific system or capability, but rather joint command and control in its most generic sense. Joint Integrating Concepts, (JICs) and Joint Functional Concepts (JFCs) are elements of the Joint Operations Concepts (JOpsC) which establishes a conceptual framework for the operational environment of the future and describe joint concepts and capabilities of the future force. JICs are not mentioned in the approved JOpsC document, but are discussed in detail in updated drafts. Joint Chiefs of Staff, *Joint Operations Concepts* (Washington D.C.: U.S. Joint Chiefs of Staff, November 2003), 19; available from <http://www.dtic.mil/jointvision/secdef_approved_jopsc.doc.; Internet; accessed 16 March 2005. See also: Joint Chiefs of Staff, *Joint Operations Concepts (JOpsC) Version 1.1 (DRAFT),* (Washington D.C.: U.S. Joint Chiefs of Staff, Action Officer Staffing Draft, undated).

[6] The Joint Chiefs of Staff, J7, *An Evolving Joint Perspective: US Joint Warfare and Crisis Resolution In the 21st Century* (Washington D.C.: U.S. Joint Chiefs of Staff, January 2003), 1; available from http://www.dtic.mil/jointvision/jwcr_screen.pdf>; Internet; accessed 16 March 2005.

[7] Future joint operational environments are described as Joint Operating Concepts (JOCs). JOCs are: "A description of how a future Joint Force Commander will plan, prepare, deploy, employ, and sustain a joint force against potential adversaries' capabilities or crisis situations specified within the range of military operations." JOCs are the primary constructs provided by the JOpsC that establish the operational contexts and conditions to allow for joint force capabilities integration. JOCs are available for description of Major Combat and Stability Operations, Homeland Security and Strategic Deterrence. See: Joint Chiefs of Staff, *Joint Operations* Concepts, 17.

[8] As an example the Army's headquarters modularity initiative is motivated at least in part by Secretary of Defense and DoD concerns that the Army hierarchies were redundant and potentially obsolete. It has been suggested that that levels of this hierarchy could be eliminated

through modularization. See: John A. Bonin, Interview with the author, 3 December, 2004, Carlisle Barracks PA.

[9] Donald Rumsfeld, Secretary of Defense, "Policy Implementation to Improve Formation and Sustainment of Joint Task Force (JTF) Headquarters," Memorandum for Secretaries of the Military Departments, Washington D.C., 4 February 2005

[10] Joint Chiefs of Staff, *National Military Strategy of the United States of America 2004: A Strategy for Today; A Vision for Tomorrow* (Washington D.C.: U.S. Joint Chiefs of Staff, 2004), 14-18.

[11] Ibid., 13, 14, 18.

[12] "Unified action synchronizes and/or integrates joint, single-service, special, multinational, and supporting operations with the operations of government agencies, NGOs, and IOs to achieve unity of effort in the operational area." Joint Chiefs Of Staff, *Unified Action Armed Forces (UNAAF), Joint Publication 0-2*, (Washington D.C.: U.S. Joint Chiefs of Staff, 10 July 2001), pp. viii, I-5; available from <http://www.dtic.mil/doctrine/jel/new_pubs/jp0_2.pdf>; Internet; accessed 16 March 2005. Also see: The White House, Office of the President, *Unified Command Plan,* (with Change-1 dated 30 July 2002 and Change-2 dated 10 January 2003 incorporated), (Washington D.C: The U.S. Joint Chiefs of Staff, 2002), 5.

[13] Partly as a result of operations in Tora Bora (also known as the Shahi Khot Valley of Afghanistan in March 2002), a JTF was formed in to assume joint command of forces in Afghanistan. Tora Bora revealed the evidence of the culmination of effective joint command through functional components within the CENTCOM AOR. See: Anthony H. Cordesman, *The Lessons of Afghanistan: War Fighting, Intelligence, and Force Transformation*, (Washington D.C.: The CSIS Press, 2002), 74, citing various sources including *Defense News*, April 15 2002, and *Jane's Defense Weekly*, June 19 2002.

[14] Joint command for operations in Iraq transferred from CENTCOM to Combined Joint Task Force 7 (CJTF 7) in March 2003 after the conclusion of Major Combat Operations phase of the campaign.

[15] Joint Chiefs Of Staff, *Joint Pub 5-00.2: Joint Task Force Planning Guidance and Procedures*, (Washington D.C.: U.S. Joint Chiefs of Staff, 13 January 1999), p. x.

[16] Ibid., p. II-2.

[17] Ibid., p. II-1. See also: Joint Chiefs Of Staff, *Unified Action Armed Forces*, p. V-13.

[18] Joint Chiefs of Staff, *National Military Strategy,* 13. See also: Joint Chiefs Of Staff, *Joint Pub 5-00.2*, p. x.

[19] Joint Chiefs of Staff, *National Military Strategy*, p. 21.

[20] Department of Defense, *Quadrennial Defense Review Report* (Washington D.C.: The U.S. Department of Defense, September 30, 2001), pp. 32, 33; available from <http://www.defenselink.mil/pubs/qdr2001.pdf>; Internet; accessed 16 March 2005, pp. 32, 33.

[21] Ibid, 15.

[22] McCarthy prepared a subsequent report to recommend an experimental system of joint capabilities called the Joint Command and Control System (JCCS). This system has never been fully developed although many aspects of it are evident in the JFCOM's SJFHQ capability. See: James McCarthy, "Transformation Study, Press Briefing, 12 June 2001," slides 5, 17; available from http://www.defenselink.mil/news/Jun2001/010612-D-6570C-021.pdf; Internet; accessed 16 March 2005. See also: James McCarthy, *Transforming Military Operational Capabilities: Transformation Study Executive Summary* (Alexandria VA: Institute for Defense Analyses, April 2001); and James McCarthy, *Toward a Standing Joint Command and Control System: Defense Transformation Study Report to the Secretary of Defense* (Alexandria VA: Institute for Defense Analyses, August 2001).

[23] *Joint Vision* is the current long-range vision that serves as front-end guidance for defense planning systems, processes, budgets, and programs. *Joint Vision* is intended to be the benchmark for Service, CINC, and Defense agency visions and influence the evolution of joint forces and joint warfighting to meet a challenging and an uncertain future." '*Joint Vision*' per se has been temporarily subsumed by *Transformation Planning Guidance* and the *JOpsC*. See: Joint Chiefs of Staff, *Chairman Of The Joint Chiefs Of Staff Instruction (CJCSI) 3010.02A, Joint Vision Implementation Master Plan (JIMP),* (Washington DC: U.S. Joint Chiefs of Staff, April 2001) p. A-1; available from <http://www.dtic.mil/cjcs_directives/cdata/unlimit/3010_02.pdf>; Internet; accessed 16 March 2005.

[24] Joint Forces Command, J9, "Forming and Sustaining Joint Task Force (JTF) Headquarters," Briefing slides with scripted commentary, Suffolk VA: The U.S. Joint Forces Command, 1 December 2004 slides 3, 4, and 8.

[25] Cordesman, *The Lessons of Afghanistan*, 154.

[26] Ibid., 74, and 154 citing various sources including *Defense News*, April 15 2002, and *Jane's Defense Weekly*, 19 June 2002.

[27] The six subordinate joint force headquarters include: Multi-National Forces-Iraq (MNF-Iraq), and its subordinate CJTF 7 / Multi-National Corps-Iraq (MNC-I), and Multi-National Security Transition Command- Iraq (MNSTC-Iraq); Combined Force Command-Afghanistan (CFC-Afghanistan) and its subordinate CJTF-180/76 (Afghanistan); and finally, JTF-Horn of Africa (JTF HOA).

[28] The JFCOM analysis reveals that the numbers of recorded JTF occurrences did not account for JTFs formed for planning but not execution. Joint Forces Command, J9, "Forming and Sustaining Joint Task Force (JTF) Headquarters," Slide 5 and speaker's notes.

[29] Ibid., slide 4.

[30] Ibid.

[31] Ibid., slide 10.

[32] Ibid., slide 8.

[33] These capabilities included: SJFHQ-CE; Deployment Distribution Operations Centers (DDOC); and Multinational Planning Augmentation Teams (MPAT). Ibid., slide 11.

[34] Ibid., slide 8.

[35] The three concurrent major operations since 2001 are Operation JOINT GUARDIAN in the Balkans, OEF operations in Afghanistan, OEF operations in the Horn of Africa. In 2003 OIF increased this number to four.

[36] For purposes of analysis, the author has attempted to draw distinctions between JTFs commanding joint forces in dynamic complex contingency situations including combat action, from other JTFs whose missions entail somewhat less operational complexity though possibly including combat. The current use of multiple JTFs within the same joint operational area reflects both the inherent inadequacies of the assigned JTF headquarters and staffs, as well as the underuse of permanent and semi-permanent subordinate unified command headquarters. The continuous use of JTFs having critical but specialized functions also suggests the need for a JTF classification system which could further educate the resourcing of these headquarters.

[37] Joint Forces Command, J9, "Forming and Sustaining Joint Task Force (JTF) Headquarters," slides 6, and 7. Note that Slide 6 depicts the distribution of a total of only 4193 augmentees between various JTF HQs.

[38] This forecast is based upon the JFCOM analysis which acknowledges a total of eight short notice, mission driven JTFs in operation as of DEC 2004. Of these, one supports a specific and focused mission (JTF Guantanamo), one support a lesser operational contingency (JTF HOA), and one commands joint forces in the Balkans. Three share command over joint forces and missions in Iraq (MNF Iraq with subordinate JTFs MNSTC-I and MNC-I). Two share command over joint forces in Afghanistan (CFC-A and subordinate CJTF-180/76). This analysis assumes that, if effectively formed, the JC2 for these three operational areas might be performed by a single robust joint headquarters with other functions established within or subordinate to that JC2 function. Coalition and multi-national considerations would ultimately impact on the establishment of additional headquarters beyond the three required to unify US-only efforts in the Balkans, Iraq, and Afghanistan. Ibid., slide 6.

[39] The 1-4-2-1 strategy calls for defense of the homeland (1) while deterring forward in and from four regions (4), swiftly defeat adversaries in two overlapping campaigns (2) with the capability of winning decisively in one of them for an enduring result (1). See: College of Aerospace Doctrine, Research And Education, "Introduction to the Warfighter Planning Course, National Security Strategy"; available from http://www.cadre.maxwell.af.mil/warfarestudies/wpc/wpc_txt/nss/nds.htm; Internet; accessed 16 March 2005.

[40] Joint Chiefs Of Staff, *CJCSI 3010.02A (JIMP)*, p.1. See also: Joint Chiefs of Staff, *Chairman Of The Joint Chiefs Of Staff Instruction (CJCSI) 3170C, Joint Capabilities Integration and Development System (JCIDS),* (Washington DC: U.S. Joint Chiefs of Staff, 24 June 2003), pp. A-1, A-7; available from <http://www.dtic.mil/cjcs_directives/cdata/unlimit/3170_01.pdf>; Internet; accessed 16 March 2005. See also: Joint Chiefs Of Staff, *Joint Concept Development And Revision Plan (JCDRP)*, (Washington DC: The U.S. Joint Chiefs of Staff, July 2004), 8.

[41] Joint Chiefs of Staff, *CJCSI 3010.02A (JIMP)*, p A-1.

[42] These requirements had been formerly established as C2 Desired Operations Capabilities (DOCS) under the Joint Vision Implementation Plan (JIMP) – the JCIDS predecessor.

[43] Department of Defense, *Joint Operations Concepts,* 22.

[44] Department of Defense, *Joint Net-Centric Environment Joint Functional Concept* (Version 0.95), (Washington D.C.: U.S. Joint Chiefs of Staff, December 2004), p. 31, available from <http:// http://www.netcentricfcb.org/FrontPage/NetCentricJFCv95.pdf>; Internet; accessed 16 March 2005. See also: Joint Chiefs of Staff, *Joint Command and Control Functional Concept, v1.0, DRAFT* (Washington DC: U.S. Joint Chiefs of Staff, 20 December 2004), pp. 14-15, 31-32; available from http://www.dtic.mil/jointvision/jroc_c2_jfc.doc; Internet; accessed 16 March 2005.

[45] Department of Defense, *Joint Operations Concepts,* 19.

[46] For example, the SJFHQ is only capable of performing as a contribution to or a core elements of a JTF headquarters. PACOM JMF headquarters are only truly capable to perform JTF C2 over operations which conform to predefined mission sets at the low end of the conflict spectrum.

[47] According to RAND analyst, Brian Nichiporouk, the "Shamrock Organization" is a model that has been usefully applied within business to rationalize core functions versus those that can that can be divested, outsourced or employed on a more temporary basis as non-central to organizational function. If this model were applied to JTF concept analysis, many parts of joint headquarters capabilities fall outside the leaf representing core joint function. Such non-core support could be readily provided by any of various service providers. The Shamrock Organization, if applied to headquarters capabilities analysis might allow for more efficient consideration of the uniquely joint aspects of the problem. This body of analysis employs a modification of the Shamrock Organization concept by establishing core functions, and seams between these to four separate categories of other function on the periphery of the central joint aspects. See: Brian I. Nichiporuk, and Carl H Builder, *Information Technologies And The Future Of Land Warfare* (Santa Monica, CA : Rand, Arroyo Center, 1995), 43.

[48] UNAAF identifies the core of C2 as performed by a Joint headquarters and staff is "command support." This analysis will refer to this as 'core JC2 functions' in order to avoid confusion with non-command related support and enabling functions. These core JC2 functions represent headquarters capacities that are distinctly joint. Activities beyond these should be considered as service, component, joint, or agency based unit-type support or enablers. See: Joint Chiefs of Staff, *Joint Pub 0-2, (UNAAF)*, p. III-1.

[49] Public Affairs capabilities are a broadly acknowledged shortfall within operational JTF headquarters. The JPASE is suggested by JFCOM analyis presented at: Joint Forces Command, J9, "Forming and Sustaining Joint Task Force (JTF) Headquarters," slide 10.

[50] Effective interface for the joint support capabilities of communications military intelligence, and public affairs are still required within the core of JC2 functionality.

[51] Joint Chiefs of Staff, *Joint Pub 5-00.2*, pp. II-21 through II-30.

[52] This figure does not depict functions or capabilities employed at CCDR level which might effect the total requirement for capability within the JTF. Selected JC2 core requirements might be mitigated by the performance of functions postured within the CCDR's headquarters or within supporting components. Such is the case with the SJFHQ, JIACG and DDOC concepts currently under development or in limited use today. This is especially true as it applies to many of the "as required" and "CJTF determines" staff capabilities described in Joint Pub 5-00.2. See: Ibid., p. xi.

[53] The relative scale of function implied in this figure is not intended to be accurate. It does attempt to make apparent that the wide swath of augmentation required to effect JC2 under any combination of existing JC2 concepts, and that it is significant relative to the total JC2 requirement.

[54] Joint Chiefs of Staff, *Joint Operations Concepts,* 22.

[55] Daniel R. Walker, *The Organization and Training of Joint Task Forces* (Maxwell Air Force Base, Alabama: School of Advanced Airpower Studies, April 1996), 1; available from <http://www.maxwell.af.mil/au/aul/aupress/SAAS_Theses/SAASS_Out/WalkerDan/danwalker.pdf>; Internet; accessed 16 March 2005. Citing: W. Ross Ashby, "Principles of the Self Organizing System," in *Modern Systems Research for the Behavioral Scientist*, ed. Walter Buckley (Chicago: Adeline, 1968).

[56] Department of Defense, *Joint Command and Control Functional Concept,* C-3.

[57] Ibid., C1-C9.

[58] The NCW JFC provides 'knowledge' and 'technical' attributes, but these are primarily dependent upon effective D-T-M-L integration. Department of Defense, *Joint Net-Centric Environment Joint Functional*, 25-30.

[59] These considerations influenced CCDR's JC2 establishment, transition and consolidation decisions. See for example: Cordesman, *The Lessons of Afghanistan,* 74. See also: James F. Dickens, "Air Component Coordination Element (ACCE) Point Paper," Santa Monica, CA.: RAND Corporation. April 2004. See also: Thomas C. Maffey, JCS J7, Interview with the author, 26 May 2004, Washington D.C.; David D. McKiernan, Commanding General 3rd US Army, Interview with the author, 25 May 2004, Atlanta GA; Dan K. McNeill, Commanding General US Army Forces Command, Interview with the author, 25 May 2004, Atlanta GA; Ronald W. Pontius, JCS J6 Command and Control Functional Coordination Board representative, telephonic interview with the author, January 13, 2005.

[60] Rumsfeld, Secretary of Defense, "Policy Implementation."

[61] The metric could determine a service's capacity to fulfill tasked JC2 responsibilities while meeting other strategic requirements. This metric is indicated in TABLE 1 of this analysis. To illustrate this, the maintenance of JTF staffs to support OEF and OIF under current constructs requires the tasking of multiple US Army Corps Headquarters, as well as a multitude of Echelons above Division (EAD) Combat Support (CS and Combat Service Support (CSS) units, for more than 2613 individuals to fulfill Joint Manning Document (JMD) requirements. Fulfillment of these commitments precludes the availability or readiness of the associated headquarters and enabler units for expeditionary force application. As well, this arrangement

severely degrades other units tasked for individuals in the area of personnel readiness. Similar strains are placed against Air Force, Navy, Marine Corps and US interagency organizations.

[62] The metric could estimate life-cycle costs of program elements across the services that are not suitable for use in both service roles and JC2 contingencies. This metric is indicated in TABLE 1 of this analysis. To illustrate this, it would become very expensive to develop, field, and fence active component forces for exclusive use in an expeditionary JC2 role. Life-cycle costs are measurable as distinct program elements. The availability of such a force would at least partly obviate the need for tasking existing unit type capabilities and augmentees to perform similar functions, thereby reducing predictable operational tempo for service-based capabilities. Because of the likely efficiencies achieved through unitary packaging of a joint capabilities, the net increases in cost would be partly offset by improved performance with in the service rotation base.

[63] The metric could evaluate how rapidly the selected capability achieves effective performance of core JC2 processes. This metric is indicated in TABLE 1 of this analysis. Department of Defense, *Joint Command and Control Functional Concept,* 25, 31-32.

[64] Five measures and metrics are extracted directly from the JC2 JFC. Three are developed through the preceding analysis of the author. Ibid., C-7.

[65] MoE were determined to be poor, adequate, or strong except for selected MoE (Force Provider Impact and Cost,) which actually provide negative indicators. These negative MoEs were determined as low, nominal, or high.

[66] The FCCE is the author's derivative of the US Air Force Air Component Coordination Element. FCCEs which would establish formal coordination and cross-component integration functions for exchange between service or functional component commands in an AOR. Not a liaison element, FCCEs would embed within the receiving component and operate as an element of that headquarters. See: Department of the Air Force, *The U.S. Air Force Transformation Flight Plan* (Washington DC: Department of the Air Force / XPXC, November 2003), 15; available from <http://www.dtic.mil/jointvision/af_trans_flightplan.pdf>; Internet; accessed 16 March 2005. ACCEs and Naval Force Coordination Elements (NFCEs) were employed to support JTFs in Afghanistan and improve coordination between the JTF and the theater functional components. ACCEs were also employed in support of land and maritime components for OIF and have since been developed as a future concept for air component C2 support within the Air Force Transformation Flight Plan. See also: Dickens, "ACCE Point Paper"; Maffey, Interview with the author.; McKiernan, Interview with the author.; and, McNeill, Interview with the author.

[67]Department of Defense, Office of the Director of Force Transformation, *The Implementation of Network-Centric Warfare* (Washington DC: The U.S. Department of Defense, January 2005), 43; available from <http://www.oft.osd.mil/library/library_files/ document_387_NCW_Book_LowRes.pdf >; Internet; accessed 16 March 2005.

[68] While the JFCOM spectrum depicted here fails to depict CCDR Command Through Components, this analysis makes a makes a logical extension to the left of this spectrum where costs are further minimized by elimination of JTF functions altogether. This sort of force-development alternative is likely to be selected if the joint force concludes first that low expected returns in effectiveness can not justify the low costs associated with applying ad hoc JC2, and

that the cost for all other alternatives is too steep. Such a direction would be consistent with the current direction of the Draft JC2 JIC which aims at partly obviating the requirement for JTF C2 by building enhanced capability at global and regional levels. This also happens to be consistent with Air Force transformation view as demonstrated in the AFTP with the intended role of the future ACCE capability. See: Joint Forces Command, "Forming and Sustaining Joint Task Force (JTF) Headquarters," slide 10.

[69] The briefing offers several recommendations to increase modularization of the JTF headquarters and reduce, but not eliminate augmentation requirements. Ibid., slide 10.

[70] Concerning Captain Scott Jasper (USN) writes of the need for effective joint standards and interfaces as a key realization taken from US PACOM's experimentation." Interoperability linkages are at the heart of increased JTF effectiveness." Jasper, "Transforming Joint Warfighting Capabilities," 70.

[71] Total requirements are based upon a assumed total of four overseas combatant commands and two concurrent major JTFs. Requirements for a rotation base conform to the current Army Force Generation Model which stipulates deployment of active forces for one year out of every three and reserve forces for one year out of every five in order to maintain appropriate unit readiness and operational tempo.

[72] Overseas (i.e. CENTCOM, SOUTHCOM, EUCOM and PACOM).

[73] A JFCOM senior mentor suggests the SJFHQ's primary future contribution as a "cross functional" team with primary responsibilities as a "Joint Liaison and Support Element." The JLSE would provide the designated JTF commander with joint trained and qualified experts who would backfill for SJFHQ elements temporarily received from the CCDR to enhance command functions with and among all elements of the National, interagency, multi-national and Joint function. See: Joint Forces Command, "Joint Enhanced Headquarters Concept," briefing slides with scripted commentary, Suffolk VA: The U.S. Joint Forces Command, 14 July 2004, slide 2.

[74] JFCOM's December 2004 analysis recommended among other things the development of Joint Reserve Units. See: Joint Forces Command, "Forming and Sustaining Joint Task Force (JTF) Headquarters," slide 14. The SecDef policy implementation directive in February 2005 supported further development of joint reserve contributions. See: Rumsfeld, "Policy Implementation."

[75] Joint doctrine and common practice indicate that "liaison personnel should be established between the JTF HQ and higher commands, between the JTF HQ and component and subordinate task force commands, between adjacent units, between supporting, attached, and assigned forces and the JTF HQ, and between the nongovernmental organizations and/or private voluntary organizations and the JTF HQ. Depending upon the actual situation, and the tempo of operations, total liaison requirements may be significant and deserve separate consideration for organization and equipping of the liaison cells. Much of this can be accomplished through the employment of unit-type liaison capabilities for which there are several among the services including the Army's Battlefield Coordination Detachment (BCD) and the Mobile Liaison Team (MLT). However, some critical aspects of liaison will likely be performed by personal delegates of the CJTF, potentially incurring the requirement for backfill to the service-provided core headquarters of senior and highly qualified persons. Nonetheless, the

bulk of liaison responsibilities can be provided as a separate modular function to the Joint C2 element. See: Joint Chiefs of Staff, *Joint Pub 5-00.2*, xii.

[76] Joint Forces Command, "Forming and Sustaining Joint Task Force (JTF) Headquarters," slide 11.

[77] A core headquarters and command group predesignated in deliberate planning provides the command concept and the basis for headquarters functionality within the given mission construct. It is imperative that this core element be comprised of a service headquarters that is suited to the primary operational demands of the given situation. Given this, a variety of headquarters types should be predesignated for mission within a theater or strategy to allow for appropriate allocation of C2 in crisis. Three Army and one Marine or Maritime force headquarters would fit the requirements under current constructs. "The qualities of commanders and their ideas are more important to a general theory of command and control than are the technical and architectural qualities of their computers and communications systems." Carl H. Builder, et al, *Command Concepts: A Theory Derived from the Practice of Command and Control* (Santa Monica, CA: RAND, 1999), vi. JFCOM senior mentor analysis recommends that specific service headquarters be designated as 'joint capable,' provided limited joint manning at all times, be assigned service forces, maintain habitual joint component relationships, and conduct joint training and exercises as designed. Joint Forces Command, "Joint Enhanced Headquarters Concept," slide 2.

[78] Functional Component Coordination Elements (FCCEs) such as a refined ACCE or the established SOCCEs could be provided by theater-level service or functional components directly to the JTF headquarters to enhance liaison as well as enhance the basic functionality necessary for the integration of that function within the newly established joint force.

[79] Walker, *The Organization and Training of Joint Task Forces*, 38.

[80] Long acknowledged deficiencies exist within a service-based and joint headquarters in the areas of Future Plans, and Civil-Military affairs – both of which are critical to the function of JC2 in a complex campaign construct. Joint headquarters provided from the services require substantial augmentation to be equal to their inherent long-range planning and Join-interagency, Multinational and Civil Military Operations integration roles. Ibid., 38.

[81] JTFAT units could be comprised of individuals in active reserve, IRR, IMA and other status in numbers and specialties equal to the predictable functions within a JTF HQs without placing an enduring strain on Service active rolls. This would allow for the further utilization of broadly experienced but retired Joint Specialty Officer (JSO) qualified individuals. These individual augmentation packages should be manned and equipped with a view toward effective and rapid integration into Joint C2 workspaces and networks. Similarly, they should account for the likely backfill of service individuals, in military grade and specialty from within the originally service-provided core C2 element who have been designated or detached for liaison duties away from the headquarters. This entails individual augmentation of the core headquarters with key and capable individuals equal to demands for performance as primary and integral members of the JTF staff. The 29th JTFAT of the US Army reserve is one of three examples for this type of unit within the Army.

[82] A JIACG module would be necessary to support the full function of and within the JTF HQs in complex contingencies, especially for planning phases. Nonetheless, similar to

supporting agencies, JIACG issues might be selectively handled by field support teams or collaboration with and through a Combatant Commander-level JIACG.

[83] Multinational Planning Augmentation Teams (MPATs) similar to those currently employed in the PACOM AOR would significantly enhance Joint C2 capabilities in situations that demand combined or coalition force generation, deployment and sustainment. These could be detached directly from a Coalition Coordination Center (CCC) or Friendly Force Command and Control (F2C2) element at Combatant Command Level, a standing Multinational Headquarters, or established from among available coalition partners during planning and execution of the crisis.

[84] Field Support Teams (FSTs) from supporting Unified Commands, Defense and Service Support Agencies would be required to support the initial establishment of JTF function and integration of supporting component capability. Examples of this include Space Support, Information Operations, Field Engineering, Contracting and Logistics support. The requirement for FSTs of these and other types should be assessed on case by case basis by the supporting element. It is likely that several supporting components, agencies or functions could serve their purpose through either collaboration, reachback or by use of deployable increments in combination.

[85] This graphic layout of the concept displays only the organizational increments but should not be taken to suggest that any other developments across D-T-M-L-P-F are not included for consideration.

[86] Functional components and supporting agencies are still challenged to provide out-of-hide the JC2 support modules addressed here. The best interests of these organizations are clearly served by improved integration of their efforts within the JTF activities. Modularization of their own internal functions could mitigate the impact of this challenge by making the support modules functionally detachable or distinct from the core agency or component function.

[87] Early candidates for reachback or networked outsourcing might include the: Contingency Planning Detachments (CPDs), JIACG, FSTs, and MPAT whose efforts, while central to JC2 function, may not be dependent upon collocation and direct management. US Navy SEALS for example have operated with a globally collaborative operational planning support cell from Coronado Island, California which supports world-wide contingency planning functions from any SEAL team employment. Not only could this sort of reachback and collaboration reduce the footprint forward, they can also dramatically reduce or even eliminate the requirement for a rotation base for these capabilities. See: James F. Dickens, “Coronado Trip Report.” Santa Monica, CA, March 2004.

[88] Department of Defense, *Joint Operations Concepts*. 24.

[89] Ibid., 24.

[90] GEN (R) McCarthy highlights selected advantages for creating JTF headquarters from out-of-hide as had been the practice leading up to the time of his study in 2001. Department of Defense, “Special DoD News Briefing on Defense Transformation,” p. 11.

[91] OIF and OEF experience bear out that none of these options achieve unified effort at the operational and tactical points of action. Take for example the total of five separate subordinate

joint force commands or JTFs operating in Iraq and Afghanistan many months after transition from major combat operations in both theaters

[92] 'Good Enough' is a descriptor applied by Army Chief of Staff General Schoomaker upon directing the early fielding of Army Battle Command Systems at a point where their capabilities were already much better than those Army C2 systems in common use. The 'Good Enough' systems still fell short of key performance requirements under original operational requirements, but Schoomaker deemed that the potential benefits of early fielding warranted the compromise on previously validated operational requirements. See: Frank Tiboni, FCW.COM, "Army Plans Spring Deployment Of ABCS." FCW.COM on Wednesday, Dec. 24, 2003; available from <http://www.fcw.com/fcw/articles/2003/1222/web-abcs-12-24-03.asp>; Internet; accessed 16 March 2005.

[93] Joint Chiefs of Staff, *National Military Strategy,* 13.

[94] Ibid., 14, 15.

GLOSSARY

ACCE	Air Component Coordination Element
AF	Air Force
AOR	Area of Responsibility
AR	Army
ASCC	Army Service Component Command
BCD	Battlefield Coordination Detachment
C2	Command and Control
C2V	Command and Control Vessel
CAPT	Civil Affairs Planning Team
CCDR	Regional Combatant Commander
CENTCOM	Central Command
CIE	Collaborative Information Environment
CPD	Contingency Planning Detachment
CSE	Communications Support Element
CSS	Combat Service Support
DART	Defense Adaptive Red -Team
DDOC	Deployment and Distribution Operations Center
DoD	Department of Defense
DJC2	Deployable Joint Command and Control
DOC	Desired Operations Capabilities
DOTMLPF	Doctrine; Organizations; Training; Materiel; Leadership and Education; Personnel; and Facilities. Sometimes also DOTLMPF.
D-T-M-L	Doctrine, Training, Materiel, And Leader Development
EAD	Echelons Above Division
EBP/O	Effects-based Planning and Operations
EUCOM	European Command
FCB	Functional Coordination Board
FCCE	Functional Component Coordination Element
FPO	Functional Process Owner
FSD	Full Spectrum Dominance
FST	Field Support Team
FYDP	Future Years Defense Program

GWOT	Global War on Terror
HOA	Horn of Africa
HQ	Headquarters
ICD	Initial Capabilities Documents
ICW	In Coordination With
ISE	Intelligence Support Element
JAD	Joint Augmentation Detachment
JC2	Joint Command and Control
JCB	Joint Capabilities Board
JCCS	Joint Command and Control System
JCIDS	Joint Concepts Integration and Development System
JCS	Joint Chiefs of Staff
JCSE	Joint Communications Support Element
JDOTMLPF	Joint DOTMLPF
JFC	Joint Functional Concept
JFCOM	Joint Forces Command
JIC	Joint Integrating Concept
JIACG	Joint Inter-agency Coordination Group
JIMP	Joint Vision Implementation Master Plan
JLSE	Joint Liaison and Support Element
JMD	Joint Manning Document
JMEP	Joint Manpower Exchange Program
JMF	Joint Mission Forces
JMLT	Joint Mobile Liaison Detachment
JOC	Joint Operating Concept
JOPES	Joint Operations Planning and Execution System
JOpsC	Joint Operations Concepts
JPASE	Joint Public Affairs Support Element
JROC	Joint Requirements Oversight Council
JTCB	Joint Targeting and Coordination Board
JTF	Joint Task Force
JTFAT	JTF Augmentation Team
MARLO	Marine Air Liaison Element
MPAT	Multinational Planning Augmentation Team

MCO	Major Combat Operation
MoE	Measures Of Effectiveness
NALE	Naval Air Liaison Element
NATO	North Atlantic Treaty Organization
NCW	Network-centric Warfare
NFCE	Naval Force Coordination Element
O/S	Overseas
OC	Operational Concept
OCP	Operational Command Post
OEF	Operation ENDURING FREEDOM
OIF	Operation IRAQI FREEDOM
OFT	Office of Force Transformation
ONA	Operational Net Assessment
OSD	Office of the Secretary of Defense
PACOM	Pacific Command
PCS	Permanent Change of Station
QDR	Quadrennial Defense Review
SecDef	Secretary of Defense
SJFHQ	Standing Joint Force Headquarters . Also SJFHQ-CE (Core Element)
SOC	Special Operations Component
SOCCE	Special Operations Component Coordination Element
SOF	Special Operations Forces
SOLE	Special Operations Liaison Element
SPG	Strategic Plan ning Guidance
TPG	Transformation Planning Guidance
TSC	Theater Security Cooperation
TTP	Tactics, Techniques and Procedures
UA	Unit of Action
UEx/UEy	Unit of Employment X and Y
UNAAF	Unified Action Armed Forces
US	United States
USSOCOM	United States Special Operations Command

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